

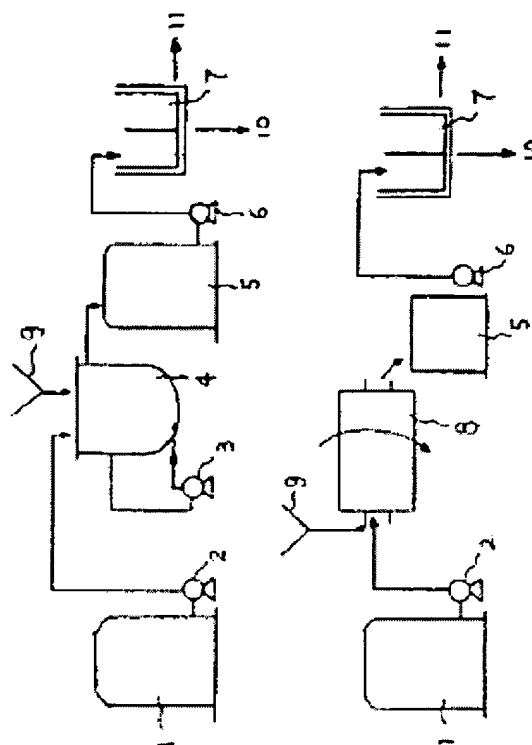
TREATMENT OF SPENT COPPER ETCHING SOLUTION

Patent number: JP63033584
Publication date: 1988-02-13
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Classification:
 - international: C23F1/46
 - european:
Application number: JP19860175353 19860725
Priority number(s):

Abstract of JP63033584

PURPOSE: To recover fine dendritic Cu powder in a high yield from a spent Cu etching soln. produced by etching with an aqueous soln. of FeCl_3 or CuCl_2 by reducing Cu ions in the spent soln. to metal Cu with metal iron at a specified temp. in a forced circulation type reaction tank or a rotary reaction tank.

CONSTITUTION: When a Cu printed board or the like is etched with an FeCl_3 soln., a spent soln. contg. FeCl_2 and CuCl is produced. The spent soln. in a tank 1 is poured into a forced circulation type reaction tank 4 or a rotary reaction tank 8, iron in a hopper 9 is put in the tank and the soln. is kept at 50-100 deg.C. In case of the tank 4, the soln. is circulated and stirred at 1-20m/min superficial velocity. In case of the tank 8, the tank 8 is rotated at 1-30m/min peripheral speed. Ferric ions and Cu ions in the spent soln. are reduced to ferrous ions forming FeCl_2 11 and fine dendritic Cu powder 10, respectively. The Cu powder 10 is separated with a centrifugal separator 7 and gaseous chlorine is blown into the remaining FeCl_2 soln. to convert the FeCl_2 into FeCl_3 . The resulting FeCl_3 soln. is used again to etch Cu.



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